

9th Workshop on RF Superconductivity

1999

Proceedings

La Fonda Hotel
Santa Fe, New Mexico USA
November 1-5, 1999

Organized by

Los Alamos
NATIONAL LABORATORY

LANSCE

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9th Workshop on RF Superconductivity

1999

**La Fonda Hotel
Santa Fe, New Mexico USA
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Organized by the
Los Alamos Neutron Scattering Center



A Division of the
Los Alamos National Laboratory

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Foreword for the 9th Workshop on RF Superconductivity

Particle accelerators have evolved from being specialized instruments of nuclear and particle physics to being the tools of choice for fields as diverse as ion implantation, high-energy particle physics, surface analysis, medical treatments, waste sterilization, airport security, food preservation, spallation neutron physics, and coherent light research. During the past 60 years, the technology of designing and building these machines has matured significantly.

The desire to achieve higher performance in these machines at lower cost is widespread. In the early 1970s, the first tests using superconducting niobium cavities were performed with the intent of taking advantage of the extremely low surface resistance of superconducting material, which would lead to high-efficiency, high-gradient accelerators. These tests heralded the beginnings of radiofrequency (RF) superconductivity as an accelerator technology in its own right.

Since then, scientists around the world have applied this technology in accelerator applications to make higher performance particle accelerators and to better understand the limiting mechanisms in superconducting cavities. In 1980, a workshop on RF superconductivity was held at Karlsruhe to bring together the contributors in the field. This was the first workshop, and now workshops are held every other year.

The 9th Workshop on RF Superconductivity was held in Santa Fe, NM on November 1 to 5, 1999. The workshop was organized by the Los Alamos Neutron Science Center (LANSCE) of Los Alamos National Laboratory. The program covered the status of and advances in RF superconductivity; technical review talks in field emission in niobium cavities, fabrication, cleaning, and surface preparation; RF power delivery; topical reviews related to materials used in superconducting cavity fabrication; and future applications of superconducting technology. The week-long meeting was separated into sessions that included laboratory review talks; invited technical talks on superconducting technology, the quest for high gradients, and future technical directions; a guided open discussion; and posters. The workshop succeeded because of contributions by 185 scientists in the field from over 20 laboratories worldwide.

The successful execution of the 9th Workshop on RF Superconductivity was dependent on two primary factors: the support of our corporate contributors and the dedication and efforts of the Local Organizing Committee. I would like to recognize and thank our sponsors for this workshop: ACCEL Instruments, Sciaky Inc., CERCA, Meyer Tool & Manufacturing Inc., Silicainox, Tokyo Denkai, Advanced Energy Systems Inc., AMAC, CST, LOTEPRO Corporation, Mitsubishi, and Heraeus. Their contributions not only made the meeting more enjoyable, they provided support for seven students to participate in the workshop.

In addition, I sincerely appreciate the efforts of the Local Organizing Committee: Lorraine Stanford, Frank Krawczyk, Stella Taylor, Amy Robinson, Garth Tietjen, Roberta Salazar, Paul Channell, and Stan Schriber. They were instrumental in having the workshop execution look effortless, which I can give assurance it was not. I also would like to recognize and thank those additional people who have helped with getting the proceedings out by providing direction, layout and formatting, and editing: Dale Schrage, Barbara Maes, Patrick Kelley, Dieter Proch, Hasan Padamsee, Ron Sundelin, Guenter Mueller, and Giorgio Cavallari.

Brian Rusnak
Los Alamos National Laboratory
July 2000



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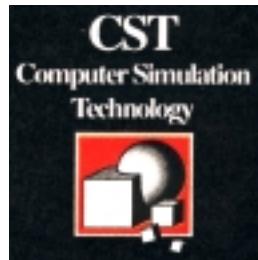
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Monday, November 01

Morning Session

Operating and Laboratory Review

Chair: Enzo Palmieri

- MOA001** Gunther Geschonke,
Performance of the LEP 200 Superconducting RF System
- MOA002** Sergio Calatroni,
High-Q, high gradient niobium-coated cavities at CERN
- MOA003** Richard Pardo,
Long-Term Operating Experience for the Atlas Superconducting Resonators
- MOA004** Charles Reece,
Overview of CEBAF Operations and SRF-related Activities at Jefferson Lab
- MOA005** Dieter Proch,
Activities with Superconducting Cavities at DESY
- MOA006** Sergey Belomestnykh,
Operating Experience with Superconducting RF at CESR and Overview of Other SRF Related Activities at Cornell University

Monday, November 01

Afternoon Session

Laboratory Review

Chair: Dale Schrage

- MOP001** Takaaki Furuya,
Recent Status of the Superconducting Cavities for KEK-B
- (withdrawn) Bernard Aune, Saclay
- MOP003** Joel Le Duff,
RFSC Activities at LAL-Orsay
- MOP004** M. Fouaidy, Orsay,
SRF Activities at Orsay IPN
- MOP005** Frank Krawczyk,
Status of the LANL Activities in the Field of RF Superconductivity
- MOP006** Anna Maria Porcellato,
Research and Development in the Field of RFSC at INFN-LNL
- MOP007** Renzo Parodi, INFN,
RF Superconductivity at INFN-Genoa
- MOP008** Carlo Pagani,
Superconducting RF Activities at INFN-LASA
- (withdrawn) Guenter Mueller, Wuppertal University
- MOP010** Nobuo Ouchi,
Superconducting RF Activities at JAERI
- MOP012** Hans-Dieter Graaf,
Operation of the S-DALINAC, Related Topics and Developments
- MOP013** Rong-Li Geng,
R&D of Copper-Niobium Superconducting Cavities at Peking University

Tuesday, November 02

Morning Session

Quest for High Gradients

Chair: Enrico Chiaveri

Performance Limitation Studies

TUA001 Lutz Lilje, DESY,

Performance limitation in sc cavities at TTF - Current status and future perspectives

(withdrawn) Henri Safa, CEA-SaclaySaclay

(withdrawn) Guenther Mueller,

Recent Findings in DC Field Emission of Nb Samples

TUA004

Jens Knobloch, Cornell University,

High-Field Q Slope in Superconducting Cavities Due to Magnetic Field Enhancement

TUA005

Stefan Simrock, DESY,

Advances in RF Control for High Gradients

Niobium Material Improvements

Chair: Guenther Mueller

TUA006A/

TUA006B Bernd Spaniol/Friedhold Schoelz, Heraeus,

Niobium For HF-Superconducting Application

TUA007

Waldemar Singer, DESY,

Quality Control and Post Purification of Niobium for TTF

Advances in Cavity Processing

TUA008

Claire Antoine, Saclay,

Alternative Approaches for Nb Superconducting Cavities

Surface Treatment

(withdrawn

see WEP019

& TUP044) Peter Kneisel, Jlab,

Development of Surface Treatment and Cavity Assembly Procedures at Jlab

TUA010

Kenji Saito,

KEK Other Cleaning Techniques

Tuesday, November 02

Afternoon Session

Poster Session I

- TUP002** N. Lobanov, D.C. Weisser, ANU,
Status Report on RFSC ANU
- TUP003** N. Lobanov, D.C. Weisser, ANU,
Lead Plating: ANU SLRs Upgrade
- (withdrawn) E. Mahner, S. Calatroni, E. Chiaveri, E. Haebel, J.M. Tessier, CERN,
A new Instrument to measure the Surface Resistance of Superconducting Samples at 400 MHz
- TUP005** M. Ono, E. Kako, K. Saito, T. Shishido, S. Noguchi and T. Yokoi, KEK,
Magnetic Field Effects on Superconducting Cavity
- TUP006** V. Palmieri, F. Stivanello, INFN-Legnaro, M. Valentino, Naples University,
Flux-Gate Magnetometry: The Possibility to Apply a Novel Tool to Monitor Niobium Chemistry
- TUP007** D. Reschke, DESY,
New Aspects of Quality Control during Preparation of TTF 1.3 GHz Cavities
- TUP008** R. Parodi, A. Dacca , G. Gemme , INFN Genova,
Analysis Of The Losses Of Superconducting Cavities As A Function Of Field And Temperature
- TUP009** G. Gemme, INFN-Genova, Ph. Bernard, CERN, R. Parodi, INFN-Genova; E. Picasso, SNS-Pisa,
Two Coupled Superconducting Cavities as a Gravitational Wave Detector: First Experimental Results
- TUP010** A.M. Porcellato et al., INFN-LNL,
On Line Performance and Upgrading of ALPI Resonators
- TUP011** E. Kako, S. Noguchi, M. Ono, K. Saito, T. ShishidoH. Safa*, J. Knobloch** and L. Lilje***, KEK, *CEA-Saclay, **Cornell University, *** DESY,
Improvement of Cavity Performance in the Saclay/Cornell/DESY's SC Cavities
- TUP012** V.A. Dravin, Yu.F. Eltsev, A.L. Karuzskii, V.N. Murzin, A.V. Perestoronin, P.P. Sverbil, Lebedev Physical Institute,
Polariton-like Interaction between Microwaves and Electronic Subsystem of Metal Oxide Superconductor
- TUP013** V.A. Dravin, A.L. Karuzskii, A.E. Krapivka, A.V. Perestoronin, Lebedev Physical Institute,
Measurements of the effective electrodynamical parameters of Nb microstrip resonator
- TUP014** P. Walsh*, R. R. Mitchell**, V. T. Toplosky*, *National High Magnetic Field Laboratory, Tallahassee, **LANL,
Low Temperature Tensile and Fracture Toughness Properties of SCRF Cavity Structural Materials

- TUP015** B.Visentin, J.P.Charrier, B.Coadou, D.Roudier CEA-Saclay,
DSM/DAPNIA/SEA,
The Cavity Heating : A Cure against the High Accelerator Field Qo Drop
- TUP016** Facco, V. Zviagintsev, INFN-,
Completion of the LNL Bulk Niobium Low Beta Quarter Wave Resonators
- TUP017** P.-D. Gall*, A.Gössel*, V. Gubarev*, W.-D. Möller* and M. Pekeler**,
*DESY, Hamburg, **ACCEL, Bergisch-Gladbach,
The superconducting cavity database for the TESLA Test Facility
- TUP018** R.Ballantini, A.Dacca, G.Gemme, R.Parodi INFN-Genoa, R.Mattera
Universita di Genova,
*Improvement Of The Maximum Field Of Accelerating Cavities
By Dry Oxidization*
- TUP019** J. Delayen for the CEBAF Upgrade Cryomodule Development Team,
Jefferson Lab,
Superconducting Cavity Development for the CEBAF Upgrade
- TUP020** C. Thomas, LAL,
Accelerating Field measurements in 3GHz Pulsed Cavities
- TUP021** R.L. Geng, J. C. Knobloch, H. S. Padamsee, LNS, Cornell University,
*Micro-Structures of RF Surfaces in the Electron Beam Weld Region
of Niobium*
- TUP022** T. Shishido, T.Fujino, H.Inoue, E.Kako, S.Noguchi, M.Ono, K.Saito, KEK,
and T.Higuchi, Nomura Plating, Co.,Ltd.,
*Test Results of the L-Band Superconducting Cavity made from
Twice Melted Niobium*
- TUP023** W. Weingarten , CERN,
*A Device to Measure the Resistivity of a Copper Cavity Surface
at Low Temperature*
- TUP025** T. Higuchi, Nomura Plating Co.,
*Development of Horizontal Chemical Polishing
for Superconducting Niobium Cavities*
- TUP027** B. Smith, G. Ellis, LANL,
*Modal Survey of a Medium Energy Superconducting Radio Frequency
Cavity for Accelerator Production of Tritium Project*
- TUP028** M. Fouaidy IPN-,
*Kapitza Conductance and Thermal Conductivity of Materials Used for
SRF Cavities Fabrication*
- TUP029** H. Safa, M. Boloré, Y. Boudigou, S. Jaidane, R. Keller, P. Nardin,
CEA Saclay, France,
*Specific Resistance Measurement of a Single Grain Boundary
in Pure Niobium*
- TUP030** K. Saito, K.Abe, E.Kako, T.Shishido, M.Ono, S.Noguchi, KEK,
*Long Term Air Exposure Effect on the Electropolished Surface
of Niobium Superconducting RF Cavity*

- TUP031** K. Saito, KEK, P. Kneisel, Jlab,
*Temperature Dependence of the Surface Resistance of Niobium
at 1300 MHz, - Comparison to BCS Theory -*
- TUP032** K. Saito, T.Higuchi, E.Kako, T.Shishido, S.Noguchi and M.Ono, KEK,
*Discovery of the Needless of Outgas Annealing after
Horizontally Continuously Rotated Electropolishing
with Niobium Superconducting RF Cavities*
- TUP033** K. Saito, H.Inoue, E.Kako, T.Shishido, S.Noguchi, M.Ono, T.Ota*,
K.Nakamishi**, Y.Matsubara***, L.Lilje****, KEK, *Toshiba Corporation,
Mitsubishi Heavy Industries, *Sumitomo Heavy Industries, ****DESY,
*High Gradient Performance by Electropolishing with 1300 MHz Single
and Multi-cell Niobium Superconducting Cavities*
- TUP034** H. Kitamura, Y.Kijima, Y.Murai, K.Saito*, E.Kako*, T.Shishido*, M.Ono*
and S.Noguchi*, Mitsubishi Electric Corporation, *KEK,
Effect of N2 Gas Exposure on the L-band Superconducting Cavity
- TUP035** C. Z. Antoine, A. Aspart, M. Berthelot, CEA-Saclay,
*Morphological and Chemical studies of Nb Samples
after Various Surface Treatment*
- TUP036** I. Arfaoui, J. Cousty, H. Safa, CEA-Saclay,
Structure of Thin Niobium Oxide Layers Adsorbed on Nb (110)
- TUP037** Facco, INFN-Legnaro, G. P. Zinkann, and K. W. Shepard , ANL,
A Vibration Damper for a Low Velocity Four Gap Accelerating Structure
- (withdrawn) G. Werner, H. Padamsee , Cornell University,
The Mushroom Cavity for the Next Millennium
- TUP040** W. Friskin York University, L. Hand, Cornell University,
*Non-uniformities In Hydrogen and Oxygen Concentration
In Niobium Films*
- TUP042** N. Ouchi, K. Mukugi*, K. Ishio**, Y. Tsuchiya, K. Kikuchi,
A. Naito K. Saito***, J. Kusano and M.Mizumoto,
JAERI, * On leave from Mitsubishi Electric Corporation (MELCO),
** Japan Steel Works (JSW), *** KEK,
Fracture Toughness and Mechanical Properties of Pure Niobium
- TUP043** H. Kaiser, DESY, Notkestrasse 85, D-22603 Hamburg, Germany,
New Approaches to Tuning of TESLA Resonators
- TUP044** P. Kneisel, Jefferson Lab,
Preliminary Experience with "In-situ" Baking of Niobium Cavities

Wednesday, November 03

Morning Session

"Hadronic" SC Futures

Chair: Giorgio Cavallari

- [WEA001](#) Tom Wangler, LANL,
Design of a Proton Superconducting Linac for a Neutron Spallation Source
- [WEA002](#) Ken Shepard, ANL,
SC Driver Linac for a Rare Isotope Facility
- [WEA003](#) Enrico Chiaveri, CERN,
*The CERN Nb/Cu Program for the LHC and Reduced-beta
Superconducting Cavities*
- [WEA005](#) Henri Safa, CEA-Saclay,
Superconducting Proton Linac for Waste Transmutation
- [WEA006](#) Helen Edwards, FNAL,
A Report on Fermilab SRF Activities and Proposals

Wednesday, November 03

Afternoon Session

Poster Session II

- WEP001** Bisoffi, V. Andreev, M. Comunian, F. Chiurlotto, A. Lombardi, A. Pisent, A.M. Porcellato, E. Tovo, INFN-Legnaro, R. Tovo, Dipartimento di Ingegneria Meccanica, Università di Padova, T. Shirai, NSRF-ICR, Kyoto University,
Completion of the First Superconducting RFQ at INFN-LNL
- WEP002** T. Fujino, V. Palmieri*, K. Saito, H. Inoue, N. Hitomi, S. Noguchi, M. Ono, E. Kako, T. Shishido, and Y. Yamazaki, KEK, *INFN-LNL,
Promising Performance of the Nb/Cu Clad Seamless Superconducting RF Cavities
- WEP003** M. Matsuoka**, N. Ouchi, J. Kusano, N. Akaoka, M. Mizumoto, S. Noguchi*, K. Sennyu**, K. Nakanishi**, K. Okubo**, T. Yamanaka**, JAERI, KEK*, MHI**,
HOM Coupler Developments for the SC Linac of JAERI/KEK Joint Project
- WEP004** P.Pierini, D.Barni, A. Bosotti, G.Ciovati, P.Pagani. INFN-Milano,
Cavity Design Tools And Applications To The Trasco Project
- WEP005** J.L. Biarrotte, H. Safa, J.P. Charrier, S. Jaidane, CEA Saclay, H. Gassot, T. Junquera, J. Lesrel, IPN Orsay,
704 MHz Superconducting Cavities for a High-Intensity Proton Accelerator
- (withdrawn) J. Waynert, LANL,
Experimental Heat Leak Measurements on the APT RF Power Coupler
- (withdrawn) M. Brunken, S. Doeberl, R. Eichhorn**, H. Genz, M. Gopych, H.-D. Graef, S. Khodyachykh, S. Kostial, U. Laier, H. Loos,A. Richter, S. Richter, B. Schweizer, A. Stascheck*, O. Titze.IKP, TU Darmstadt,
Special Topics and Developments from the S-DALINAC
- WEP008** S. Humphries, UNM Albuquerque, J. Petillo, SAIC, N. Dione Raytheon Cor.,
Secondary-electron Emission Modeling on a Conformal Mesh for Electrons
- WEP009** A. Mosnier, M. Juillard, P. Bosland, P. BrÉdy,S. Chel, M. Maurier, F. Orsini DAPNIA, CEA/Saclay , D. Boussard, E. Chiaveri, R. Losito SL/RF, CERN,
Achievement of the SOLEIL Cryomodule
- (withdrawn) V.V. Komarova*, L.M. Sevryukova*, I.A. Zvonarev* V. M. Maximov**, B.A. Sokolov***, *IHEP, Protvino, **Ministry of Russian Federation for Atomic Energy, *** NIEFA, St.-Petersburg,
Superconducting Linear Electron Accelerator for Applied Purposes

(withdrawn) R. Gentzlinger(1), S. Atencio(1), B. Campbell(1), K.C. Chan(1), A. Cimabue(1), M. Cola(1), G. Ellis(1), W. Clark(1), H. Haagenstad(1), D. Hammon(1), W. B Haynes(1), J.P. Kelley(1), F. Krawczyk(1), J. Kuzminski(2), M. Manzo(1), F. Martinez(1), H. Martinez(1), J. McClellen(1), J. Mitchell(1), R. Mitchell(1), D. Montoya(1), J. Moss(1), S. Quintana(1), A. Rendon(1), B. Rusnak(3), H. Safa(4), D. Schrage(1), B. Smith(1), F. Smith(1) and M. Trujillo(1), (1) Los Alamos National Laboratory, (2) General Atomics, (3) Lawrence Livermore National Laboratory, (4) CEA. Saclay,
Design and Fabrication of Superconducting Radio-frequency Cavities for The APT Proton LINAC

WEPO12

N.Kakutani, M.Takahashi, T.Ota, T.Kuriyama, A.Yamashita, T.Yoshiyuki Y.Oonishi, Y.Tanabe, E.Kako*, S.Noguchi*, M.Ono*, K.Saito*, T.Shishido* and Y.Yamazaki*, Toshiba Corporation, *KEK,
Development of a 1.8K Level Cooling System and Cryostat for a Superconducting Cavity

WEPO13

R. Mitchell, R Gentzlinger, G. Ellis, LANL, ESA-DE,
Structural Analysis of the APT Superconducting Cavities

WEPO14

D.Barni, C.Pagani, C.Gesmundo, G.Varisco, INFN-Milano,
Beta Tunable 700 MHz Insert With Natural Convection Precooling

WEPO15

C. Travier, S. Chell, M. Desmons, G. Devanz, CEA-Saclay, P. Lepercq, T. Garvey, LAL-Orsay,
Design and Test of a 1.3 GHz Travelling Wave Window

WEPO16

H. Vogel, ACCEL,
Production of Superconducting Cavities for LHC

WEPO17

H. Vogel, ACCEL,
Production of Superconducting 9-cell Cavities for the TESLA Test Facility, Stanford University and FZ Rossendorf

WEPO18

H. Vogel, ACCEL,
Engineering and Fabrication of a low beta Prototype Superconducting Accelerator Module for FZ-Juelich

WEPO19

P. Kneisel, Jefferson Lab; V.PALMIERI, INFN Legnaro and K. SAITO, KEK,
Development of Seamless Niobium Cavities for Accelerator Application

WEPO20

N. Ouchi, N. Akaoka, E. Chishiro, K. Hasegawa, J. Kusano, M. Mizumoto H. Inoue*, E. Kako*, S. Noguchi*, M. Ono*, K. Saito*, T. Shishido*, K. Mukugi**, C. Tshukishima**, O. Takeda***, M. Matsuoka****, JAERI, KEK*, MELCO**, TOSHIBA***, MHI****,
Superconducting Cavity Development for High Intensity Proton Linac in JAERI

WEPO21

E. Newman, K.C.D.Chan, B.Campbell, R.Valicenti, LANL,
APT Cryomodule Assembly and the Usefulness of the Mockup Model

WEPO22

R. Eichhorn, U. Ratzinger GSI,
Development of a Superconducting H-mode Cavity for the Low-Beta Regime

- WEP023** KCD. Chan, LANL, Henri Safa, CEA, Saclay, C. Pagani, INFN-Milano, Mizumoto, JAERI,
Review of Superconducting RF Technology for High-Power Proton Linacs
- WEP024** H. Gassot, IPN-Orsay,
Mechanical Issues of SRF niobium cavities coated by thermal sprayed copper
- (withdrawn) P. Blache, C. Commeaux, G. Guillier, T. Junquera, H. Saugnac, IPN Orsay, D. Braud, H. Safa, P. Sahuquet, CEA Saclay
"CRYHOLAB", A New Horizontal Test Cryostat For SCRF Cavities
- (withdrawn
see THA009) E. Schmierer, K. C. D. Chan, D. C. Gautier, J. G. Gioia, W. B. Haynes, F. Krawczyk, R. E. Lujan, M. A. Madrid, J. A. Waynert, LANL; B. Rusnak, LLNL
Thermal and Mechanical Testing Status of the SCRF Power Coupler for the APT Accelerator
- WEP025** H. Saugnac¹, P. Blache, C. Commeaux, G. Guillier, T. Junquera, D. Braud, H. Safa, P. Sahuquet^c
"CRYHOLAB", A New Horizontal Test Cryostat for SCRF Cavities
- WEP027** H.Hattori*,K.Ohkubo*,K.Sennyu*,M.Inoue*,K.Hosoyama**,
* Mitsubishi Heavy Industries Ltd., ** KEK,
Manufacturing Techniques of Full Scale Crab Cavities and a Simplified Co-Axial Beam Pipe for KEK-B
- WEP028** Joshi, C., B. Bent, Energen, Inc., J. Preble and V. Nguyen, Jlab,
High Force, Precision Positioning Using Magnetic Smart Materials
- WEP029** R. Bandelmann, H. Kaiser, G. Kreps, M. Liepe, C. Martens, A. Matheisen, C. Pagani*, H.-B. Peters, D. Proch, J. Sekutowicz, W. Singer, DESY, (*)INFN,
Nb Prototype of the Superstructure for the TESLA Linear Collider
- WEP030** H. Chen, M. Ferrario*, G. Kreps, M. Liepe, V. Puntus, J. Sekutowicz, DESY, (*)INFN,
RF Measurements on Cu Model of the Superstructure for the TESLA Linear Collider
- WEP031** G. Kreps, J. Sekutowicz, D. Proch, DESY,
Half-cell and Dumb-bell Frequency Testing for the Correction of the TESLA Cavity Length
- WEP032** S.Mitsunobu, T.Furuya, Y.Kijima, T.Tajima, T.Tanaka, KEK,
High Power Input Coupler for KEKB SC Cavity
- WEP033** M. Cola, LANL,
"Dissimilar Welds for the APT Superconducting Cavity's Cryogenic Plumbing System"
- WEP034** E.Chiaveri, R.Losito, S.Calatroni, CERN, A.Dacca, G.Gemme, R.Parodi, INFN-Genova, D.Barni, A.Bosotti, C.Pagani, G.Varisco, INFN-Milano,
Production And Test Of The Prototype Beta 0.85 Five Cell Cavity For The Trasco Project

(*withdrawn*) L.M. Sevryukova*, V.I. Suzdalev*, I.A. Zvonarev*, N.A. Ivanov**, V.M. Belugin***, * IHEP, Protvino, ** Ministry for Atomic Energy of Russian Federation, ***Moscow Radio Technical Institute of Russian Academy of Science

Superconducting Accelerating RF structure for SVAAP Accelerator

WEP036

E. Zaplatine, FZ Juelich,

Spoke Cavity Simulation with MAFIA

WEP037

S. Kurennoy, LANL,

Beam Energy Loss versus Velocity in SC Cavities for SNS Linac

WEP038

C. Reece, B.D. Madre, J.R. Delayen, L.R. Doolittle, Jlab,

Dealing with a Large Installation of SRF Cavities:

Characterizing Limitations and Exploiting Operational Flexibility

(*withdrawn*

see TUP019) J. Delayen for the CEBAF Upgrade Cryomodule Development Team, Jefferson Lab

Cryomodule Development for the CEBAF Upgrade

(*withdrawn*

see TUP019) J. Delayen for the CEBAF Upgrade Cryomodule Development Team, Jefferson Lab

An RF Input Coupler for the CEBAF Upgrade Cavities

(*withdrawn*

see TUP019) J. Delayen for the CEBAF Upgrade Cryomodule Development Team, Jefferson Lab

An RF Input Coupler for the CEBAF Upgrade Cavities

WEP042

I. Gonin, I. Jelezov, H. Kaiser, T. Khabiboulline, X. Singer, W. Singer, DESY, H.-G. Brokmeier, R. Schnieber, TU Clausthal,

Hydroforming of Back Extruded Niobium Tubes

Thursday, November 04

Morning Session

SC Technology

Chair: Ken Shepard

Advanced Manufacturing

- THA001** Enzo Palmieri, INFN,
Spinning of TESLA-Type Cavities
- THA002** Hartwig Kaiser, DESY,
Advances at DESY in Hydroforming of TESLA Cavities
- THA003** Sebastien Bousson, Orsay-IPN,
Advances in SRF Cavity Stiffening by Thermal Spraying
- THA004** Anna-Marie Valente, CERN,
Study of the Residual Resistance of Superconducting Niobium Films at 1.5 GHz

Cryomodules

- THA005** Carlo Pagani, INFN,
Advances in Cryomodule Design and New Approches

High Power and HOM Couplers

Chair: Shuichi Noguchi

- THA006** Eric Chojnacki, Cornell
- THA008** Hans-Peter Kindermann, CERN,
The Variable Power Coupler for the LHC Superconducting Cavities
- THA009** Brian Haynes, LANL,
High-Power Coaxial Coupler Design and Testing
- THA010** Wolf-Dietrich Moeller,
High Power Coupler for TESLA Test Facility

Thursday, November 04

Afternoon Session

Guided Discussion Groups

(withdrawn) *Session 1:Trade-off studies of SC vs. NC for high intensity linacs*
(Chair: Henri Safa, Saclay)

(withdrawn) *Session 2:Operational availability and reliability*
(Chair: Stan Schriber, LANL)

(withdrawn) *Session 1:Trade-off studies of SC vs. NC for high intensity linacs*
(Chair: Henri Safa, Saclay) (withdrawn)

THP003 *Session 3:Which way to the frontier? Novel structures, materials,
fabrication*
(Chair: Dieter Proch, DESY)

Friday, November 05

Morning Session

"Leptonic" SC Futures

Chair: Ron Sundelin

(*withdrawn*) Hassan Padamsee, Cornell University,
The Future of SRF in High Current Rings

FRA006 Hassan Padamsee, Cornell University,
SRF for the Muon Collider

(*withdrawn*) Christoph Leemann, JLab,
12-30 GeV Recirculating Linacs

FRA002 George Neil, Jlab,
High Power FELs Driven by RF Superconducting Linacs

FRA005 Helmut Burkhardt, CERN,
ELFE at CERN

FRA003 Dieter Trines, DESY,
TESLA Project Overview

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